How to Use the
Hurricane Threats & Impacts Web Interface

Description: The Hurricane Threats and Impacts (HTI) website contains local decision-making information relative to four primary hazards (over land) associated with tropical storms and hurricanes. These hazards include wind, storm surge, flooding rain, and tornadoes. Although general forecast information will be available anytime an active tropical system threatens, more specific information about threats and potential impacts will be available once hurricane and/or tropical storm watches and warnings are in effect. The service area covers the United States coastal areas along the Atlantic Ocean, Gulf of Mexico, and Caribbean Sea. Coordinated information will be provided from Brownsville, TX to Caribou, ME, as well as Puerto Rico and the U.S. Virgin Islands. In some areas of the country, certain hazard information may extend farther inland. The web interface is intended to allow users to intuitively interact with an expanding volume of hurricane decision-making information, while easily transitioning between local, state, regional, and national scales.

Through varying perspectives, viewable information is organized under four separate page tabs:

1. Local Forecast Tab
2. Local Statements Tab
3. Local Threats/Potential Impacts Tab
4. Local Threat Meter Tab

Under these tabs, the following information types are contributed by local Weather Forecast Offices (WFOs) for their respective areas of responsibility:

- The latest public forecast, including watches and warnings;
- Statements describing an overview of the situation and highlighting particular hazard(s) of local concern;
- Threat assessments (per hazard) which account for forecast uncertainty, along with corresponding descriptions of potential impacts.

While storm-centric information is offered through the National Hurricane Center (NHC) website, location-centric information is offered through this HTI website according to selections on the map. Color-coded graphics with supporting text help to convert complex meteorology into relatable terms sufficient for effective planning and preparations. For decision-making, it conveniently supplies the most likely scenario for enacting hurricane emergency plans (according to the forecast) and the reasonable worst case scenario for determining the extent to which preparations should be made and the earliest time that they should be completed (according to a prescribed safety margin).

Navigation: Upon arriving on the HTI website, users will find the aforementioned tabs located just above the map window and aligned left to right. Users can transition between information types simply by selecting among the tabs with a left mouse click.

Here are some additional instructions and associated commentary on website navigation and options for tailoring the output.

Local Forecast Tab

The Local Forecast tab is the default tab. When users arrive on the HTI website, they will be placed here. Active watches and/or warnings for tropical storms and hurricanes will be displayed on a zoomed-out map. Users may then zoom-in to an area of interest using the **+/-** zoom buttons located in the upper left of the map window. Recentering is accomplished by holding down the left left mouse button over an interest area and gliding the map display to the desired position.

To retrieve a local forecast, click the left mouse button over a particular location on the map. The retrieved forecast is viewable in the text window below the map. Users have two modes in which to view the forecast: **Neighborhood** or **County-Zone**. These buttons are located just below the map window on the right side of the display. Neighborhood is the default which yields a point-specific forecast (e.g., for Miami). However, users may opt to view a more general forecast for an entire county or zone. If so, County/Zone should be selected (e.g., for Miami/Dade County).

Within the local forecast, tropical storm and/or hurricane watches are issued about 48 hours ahead of the arrival of tropical storm force winds. Warnings are issued about 36 hours ahead. Yet, enhanced wording in tandem with special icons may be realized within the local forecast whenever the threat of tropical winds becomes a concern (out to five days).

Local Statements Tab

The Local Statements tab allows users to pull select hazard information from the Hurricane Local Statement (HLS) and Tropical Cyclone VTEC (TCV) text products. The information is displayed within the text window while the map window shows active tropical storm and/or hurricane watches and warnings. Beneath the map window on the right side, users are able to select from among two modes in which to view statement text: **County-Zone** or **Areawide**. When selecting Areawide, information is extracted from the latest HLS. The information is more general in nature as it describes things relative to a WFO's entire area of responsibility (e.g., for South Florida). When selecting County-Zone, information is extracted from the latest TCV. It is more specific in nature as things are described county by county (parish by parish), and at times even at sub-county and/or city scales (e.g., for Miami/Dade County). Relative text is displayed according to the chosen mode and for the location selected on the map. To view information in a different area, simply click the desired location on the map.

Under this tab, users will also notice four hazard buttons just below the map window on the left side: **Wind**, **Storm Surge**, **Flooding Rain**, and **Tornadoes**. These buttons help keep the displayed information focused on a particular hazard at a time. The default hazard is Wind. More so, switching among the hazards also prompts the map display to change. That is,

if the user selects Flooding Rain then the map will update and display active flood watches and warnings; if Tornadoes, then active tornado watches and warnings.

Hazard information, whether general or specific, is easily obtained for varying locations of interest. For decision-making, details about the forecast magnitude and timing of a hazard, the associated threat given inherent forecast uncertainty, and itemized potential impacts are all conveniently outlined. Decision-makers can enact emergency plans accordingly, while factoring-in a prescribed safety margin with consistency.

Local Threats/Impacts Tab

Under the Local Threats/Impacts tab you will again find the same four hazard buttons below the map window to the left: **Wind**, **Storm Surge**, **Flooding Rain**, and **Tornadoes.** The threat information displayed on the map is relative to the hazard chosen from among these buttons. The graphics depict the relative threat assessment of the corresponding hazard that includes both the forecast magnitude and its inherent uncertainty. Each represents the reasonable worst case scenario and denotes an appropriate margin of safety. That is, it reveals the extent to which preparations should be made, per hazard, to ensure safety. Threat maps are color-coded and comprised of threat levels ranging from Little/None to Extreme. Regardless of what the forecast itself denotes for a given location (as accessed under Local Forecast or Local Statements tabs), the level of threat further conveys the extent to which preparations should be made to fully protect against that hazard at that location.

More so, according to the hazard of choice and the identified location of interest, the text window will display statements of potential impacts in bulleted format. These impacts statements have been localized to fit the geographic region and will be refined by each WFO during the coming years. To evoke the necessary societal response, relatable terms are used to describe the impacts that would occur if the reasonable worst case scenario were to actually occur.

For more information on the hurricane threats and impacts product suite as displayed under this tab, please see the Product Description Document.

At the bottom of this tabbed page, users may also download threat maps for personal use. Click on the desired hazard according to the file type (e.g., KML or PNG) for download.

Local Threat Meter Tab

The Local Threat Meter tab displays threat information in a rather unique way, and uses several familiar buttons to accomplish the task. Users will find the same four hazard buttons beneath the map window to the left, as well as several mode buttons to the right. The hazard buttons allow users to specify the threat depiction for map display. Importantly, the Threat Meter tab enables the dynamic generation of a four-bar threat meter (one bar for each hazard) to be displayed below the map window according to a selected location. The threat meter reveals the threat(s) of

greater (lesser) concern for particular locations. This helps to keep decision-makers focused on the right threats (**Wind**, **Storm Surge**, **Flooding Rain**, and **Tornadoes**) in the right areas.

Threat Meter information can be generated and displayed according to three modes: **Neighborhood**, **County-Zone**, or **Areawide**. If in **Neighborhood** mode the metered information is generated relative to the point location clicked on the map (e.g., Miami); if in **County-Zone** mode it is relative to the corresponding county or sub-county zone containing the point location (e.g., Miami/Dade County); and if in **Areawide** mode it is relative to the larger area or region the point location resides (e.g., South Florida).

Again, the threat meter bar chart compares the threat levels for all four hazards in a geo-relative sense according to the desired mode. For more information on the hurricane threats and impacts product and service suite as displayed under this tab, please see the HTI Product Description Document.

At the bottom of this tabbed page, users again have the opportunity to download threat maps for personal use. Click on the desired hazard according to file type (e.g., KML or PNG) for download.